

SEQUENCE LISTING

<110> REILING, KEITH KINKEAD
NEWMAN, JACK D.
WITHERS III, SYDNOR T.
PITERA, DOUGLAS J.
KEASLING, JAY D.
MARTIN, VINCENT J.J.

<120> METHODS FOR IDENTIFYING A BIOSYNTHETIC PATHWAY GENE PRODUCT

<130> BERK-032WO

<140> Unassigned
<141> 2004-09-29

<150> 60/507,220
<151> 2003-09-29

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<211> 1671

<212> DNA

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<223> synthetic amorphadiene synthase gene

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<212> DNA

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<212> DNA

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<400> 25

<210> 26

<211> 1476

<212> DNA

<213> *Escherichia coli*

<400> 26

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| caacaacaat | tacacaatac | aaacttgc | atgactgaac | taaaaaaaca | aaagaccgt | 120 |
| gaacaaaaaa | ccagacctca | aatgtcggt | attaaaggt | tccaaattta | catcccaact | 180 |
| caatgtgtca | accaatctga | gctagagaaa | tttgatggcg | tttctcaagg | taaatacaca | 240 |
| attggctctgg | gccaacccaa | catgtcttt | gtcaatgaca | gagaagatat | ctactcgatg | 300 |
| tccctaactg | tttgtctaa | gttgcataag | agttacaaca | tcgacaccaa | caaaattgg | 360 |
| agattagaag | tggtaactga | aactctgatt | gacaagtcca | agtctgtcaa | gtctgtctt | 420 |
| atgcaattgt | tttgtgaaaaa | cactgacgtc | gaaggattt | acacgcttaa | tgcctgttac | 480 |
| gggtgtacca | acgcgttgtt | caactcttt | aactggattt | aatctaacgc | atggatgg | 540 |
| agagacgcca | ttttagttt | cggtgatatt | gccatctacg | ataagggtgc | cgcaagacca | 600 |
| accgggtgt | ccggtaactgt | tgctatgtgg | atcggtcctg | atgctccaat | tgtatttgac | 660 |
| tctgttaagag | cttcttacat | ggaacacgccc | tacgattttt | acaagccaga | tttcaccagc | 720 |
| gaatatccct | acgtcgatgg | tcattttca | ttaacttgg | acgtcaaggc | tcttgcataa | 780 |
| gtttacaaga | gttattccaa | gaaggctatt | tctaaagggt | tggttagcga | tcccgtgg | 840 |
| tcggatgctt | tgaacgttt | gaaatatttc | gactacaacg | tttccatgt | tccaacctgt | 900 |
| aaattggtca | caaaatcata | cggtagatta | ctatataacg | atttcagagc | caatcctcaa | 960 |
| ttgttcccag | aaggtagcgc | cgaatttagct | actcgcgatt | atgacgaatc | tttaaccgat | 1020 |
| aagaacattt | aaaaaacttt | tgttaatgtt | gctaagccat | tccacaaaaga | gagagttgcc | 1080 |
| caatcttga | ttgttccaaac | aaacacaggt | aacatgtaca | ccgcatactgt | ttatggcc | 1140 |
| tttgcatctc | tattaaacta | tgttggatct | gacgacttac | aaggcaagcg | tggtggat | 1200 |
| ttttcttacg | gttccgggtt | agctgcata | ctatattctt | gcaaaaattgt | tggtgacgtc | 1260 |
| caacatatta | tcaaggaaatt | agatattact | aacaaattag | ccaagagaat | caccgaaact | 1320 |
| ccaaaggatt | acgaagctgc | catcgaattt | agagaaaatg | cccatttga | gaagaacttc | 1380 |
| aaacctcaag | gttccattga | gcatttgc | agtgggtttt | actacttgac | caacatcgat | 1440 |
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<213> Artificial Sequence

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<400> 27

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<212> DNA
<213> Sacc

<210> 29
<211> 1356
<212> DNA
<213> Sacc

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| gttttagata | caaaatatga | agcatttgc | gtcggattat | cgcaagaat | gcatgctgt | 120 |
| gccccatcctt | acggttcatt | gcaagggtct | gataagtttgc | aagtgcgtgt | aaaagtaaa | 180 |
| caatttaaag | atggggagtg | gctgtaccat | ataagtccctt | aaagtggctt | catccctgtt | 240 |
| tcgataggcg | gatctaagaa | cccttcattt | aaaaaaagtta | tcgctaacgt | atttagctac | 300 |
| tttaaaccta | acatggacga | ctactgcaat | agaaaacttgt | tcgttattga | tatttctct | 360 |
| gatgatgcct | accattctca | ggaggatagc | gttaccgaac | atcgtggcaa | cagaagattt | 420 |
| agttttcatt | cgcacagaat | tgaagaagtt | ccaaaaacag | ggctgggctc | ctcggcaggt | 480 |
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| gtagacaaat | atagagaagt | tattcataat | ttagcacaag | ttgctcatttgc | tcaagctcag | 600 |
| ggtaaaatttgc | gaagcgggtt | tgatgtacg | ggggcagcat | atggatctat | cagatataga | 660 |
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| ccttcgggat | taactttatg | gatggcgtat | attaagaatg | tttcagaaac | agtaaaacttgc | 840 |
| gtccagaagg | taaaaaatttgc | gtatgattcg | catacgccag | aaagcttggaa | aatatataaca | 900 |
| gaactcgatc | atgcatttttgc | tagatttgc | gatggactat | ctaaacttgc | tcgcttacac | 960 |
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| ttggatgttgc | gccagaccc | aaaaggagtt | cttacttgc | taatacctgg | tgctgggtgt | 1200 |
| tatgacgcca | ttgcagtgtat | tactaagcaa | gatgttgc | tttagggctca | aaccgcttaat | 1260 |
| gacaaaaagat | tttcttaaggt | tcaatggcttgc | gatgttaactc | aggctgacttgc | gggtgtttagg | 1320 |

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1356

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<211> 1191

<212> DNA

<213> *Saccharomyces cerevisiae*

<400> 30

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<212> DNA

<213> Artificial Sequence

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<223> "single operon" nucleotide sequence

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| taccGGGGCC | cccCTCGAGG | tcgacGGTAT | cgataAGGTT | gatATCGAA | tcctGCACTA | 240 |
| ggagGAATT | accatGTCA | taccGTTCTT | aacttCTGCA | ccgggAAAGG | ttattatTTT | 300 |
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| aacctACCTG | ctaataAGCG | agtcatCTGC | accagataACT | attGAATTGG | acttCCCGGA | 420 |
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